I·NEDSS
Indiana National Electronic Disease Surveillance System

Statewide Rollout Plan – May 2009

EXECUTIVE SUMMARY

The Indiana National Electronic Disease Surveillance System (I-NEDSS) is a web-based application that promotes the collection, integration, and sharing of data at federal, state, and local levels. The purpose of I-NEDSS is to automate the current process for reporting Lab Reports, Communicable Disease Reports (CDR), and Case Investigations. Eventually, I-NEDSS will replace the paper-based reporting and case investigation system currently in use.

I-NEDSS is above all else, a tool to support and enhance the reporting process outlined in IAC 410 (http://www.in.gov/legislative/iac/T04100/A00010.PDF). Benefits of I-NEDSS include an increase of speed, accuracy, and accountability in our disease surveillance efforts. This will be accomplished by having the reporting and investigation forms accessed, completed, and submitted electronically.

The I-NEDSS Project Team engaged six Local Health Departments (LHDs) in a pilot of the Notification Module beginning on March 31, 2008. A second pilot was undertaken involving those same six LHDs beginning August 11, 2008 and focusing on the Case Investigation Module. The goal of both pilots was to validate the ability for I-NEDSS to support the disease reporting process and to solicit feedback from the LHDs regarding enhancements and improvements to the system.

In October 2008, the I-NEDSS Project Team released an update of I-NEDSS and engaged an additional twelve LHDs in an expanded pilot of I-NEDSS. The goal of expanding the pilot was to validate the ability of the I-NEDSS Project Team to conduct training and support the I-NEDSS application on a large scale.

The pilot process was completed in November, and as of December 1, 2008 there are 18 LHDs participating in I-NEDSS.   Those counties are:

*Hamilton	*Hendricks	*Putnam
*Johnson	*Kosciusko	*Floyd
Porter	Starke	Elkhart
LaGrange	Huntington	Tippecanoe
Boone	Hancock	Shelby
Delaware	Henry	Vigo

Denotes original pilot LHD

The I-NEDSS Project Team is currently working to incorporate the feedback from these counties, and add additional enhancements to be released in February 2009 as I-NEDSS version 3.4.1.

I-NEDSS is currently an ISDH development effort based in the Public Health Preparedness Emergency Response (PHPER) Commission and championed by project sponsorship from the Epi Resource Center (ERC), Surveillance and Investigation Division (SID). Federal monies fund the development efforts 100%. The primary funding source is the CDC's Preparedness Cooperative Agreement Grant with supplemental funding provided by the CDC's Epidemiology and Laboratory Capacity (ELC) Grant.

I-NEDSS is free and available to any Local Health Department or Infection Control Practitioner within the State of Indiana.

In 2009, the I-NEDSS Project Team will be delivering 10 district trainings on I-NEDSS throughout Indiana. The following document describes those training activities in detail, and gives you information on how you can participate in I-NEDSS.

The I-NEDSS Project has had several successes during 2008. With your participation we will make major improvements in disease reporting and surveillance for the State of Indiana.

I-NEDSS STATEWIDE ROLLOUT

The I-NEDSS Project Team is also planning for a Statewide Rollout of I-NEDSS, to begin in March 2009.

Beginning with District 6, an I-NEDSS Training Team will be visiting two Preparedness Districts every eight weeks to conduct training for any LHD that wishes to participate in I-NEDSS. After receiving the training, LHDs may then solicit hospitals that submit Communicable Disease Reports to them and encourage the Infection Preventionist (IPs) to complete online I-NEDSS Training to begin utilization of the system for disease reporting.

Training will be given in contiguous districts, so if your LHD cannot participate in training inside of your district, you will have opportunities to participate in training in neighboring districts. The I-NEDSS Training Team will work to include your LHD wherever you choose to do training.

Monthly announcements regarding I-NEDSS training and the statewide rollout will be made via the following areas:

- LHD Resource Website (https://myshare.in.gov/isdh/lhdresource/default.aspx)
- LHD-ISDH Conference Call (2nd Friday of every month at 9:30 am EST)
- ISDH Epi Newsletter (http://www.in.gov/isdh/17458.htm)
- Indiana Health Alert Network (IHAN)
- Direct Communication via the ISDH Field Epidemiologists
- Other outlets as identified

I-NEDSS GOALS – STATEWIDE ROLLOUT

1. To conduct 10 separate district trainings for I-NEDSS, one within each preparedness district, with a specific focus on the operations of a Local Health Department.
2. To encourage Local Health Departments to adapt I-NEDSS as their tool-of-choice for completing ISDH Reportable Disease Investigations.
3. To support Local Health Departments as they work with their local Infection Control Practitioners (ICP) by releasing online training materials, providing helpdesk support and consulting, and encouraging the development of a community of users for I-NEDSS.
4. To release no fewer than six enhancements of I-NEDSS, with enhancements driven by feedback at the local level.
5. To work with major reference labs and major hospital labs on electronic submission of laboratory reporting, including expanding the sources of data and improving the quality of the data.

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I-NEDSS Production Release and District Training Schedule

02/09	I-NEDSS Production Release v3.4.1
03/04	District 6 Training @ Ball Memorial Hospital, Muncie *Blackford, Delaware, Fayette, Grant, Henry, Howard, Jay, Madison, Randolph, Rush, Tipton, Union, Wayne*
04/09	I-NEDSS Production Release v3.4.2
04/22	District 3 Training @ Parkview Hospital, Ft. Wayne *Adams, Allen, De Kalb, Huntington, La Grange, Miami, Steuben, Noble, Wabash, Wells, Whitley,*
Week of 05/25	I-NEDSS Production Release v3.4.3
06/15	District 1 Training @ Methodist Hospital Southlake Campus, Merriville *East Chicago HD, Gary HD, Jasper, Lake, La Porte, Newton, Porter*
06/16	District 2 Training @ Ivy Tech, South Bend *Elkhart, Fulton, Kosciusko, Marshall, Pulaski, St. Joseph, Starke*
06/22	District 4 Training @ Tippecanoe County Office Building, Lafayette *Benton, Cass, Carroll, Clinton, Fountain, Montgomery, Tippecanoe, Warren, White*
Week of 07/10	I-NEDSS Production Release v3.4.4
07/28	District 7 Training @ Ivy Tech, Terre Haute *Clay, Greene, Owen, Parke, Putnam, Sullivan, Vermillion, Vigo*
08/05	District 8 Training @ Ivy Tech, Bloomington *Bartholomew, Brown, Jackson, Lawrence, Monroe, Orange, Washington*
Week of 09/04	I-NEDSS Production Release v3.4.5
09/25	District 10 Training @ Ivy Tech, Evansville *Crawford, Daviess, Dubois, Gibson, Knox, Martin, Pike, Perry, Posey, Spencer, Vanderburgh, Warrick*
09/30	District 9 Training @ Ivy Tech, Lawrenceburg *Clark, Dearborn, Floyd, Harrison, Jefferson, Jennings, Ohio, Ripley, Scott, Switzerland*
Week of 10/30	I-NEDSS Production Release v3.4.6
Week of 11/16	District 5 Training – Indiana State Department of Health, Indianapolis *Boone, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan, Shelby*

TRAINING PLAN

ISDH will conduct a day-long training session onsite in each district.   Class-time will typically be from 9am-4pm (local time) with 1 hour allowed for lunch. We will attempt to schedule classes at either a Local Health Department or a major hospital in each district. Training is designed primarily to support LHDs. If a hospital is hosting the training session, the Infection Control Practitioners from that hospital will be invited to the training.

Training will take place in the following subject areas:
1. Initiating an observation (CDR or Case Investigation)
2. Responding to an observation (CDR or ELR)
3. Basic I-NEDSS roles and administration
4. Reporting Issues via helpdesk
5. How to encourage your reporting community to participate in I-NEDSS

Training date will be dependent on the availability of a proper training facility.

Verification of training requirements at the training facility will be needed prior to training:
1. Dedicated training space/room (preferred but not required)
2. Equipment (PCs, laptops, connections, other hardware requirements)
3. Connection to Internet and PCs utilizing Internet Explorer v6 or higher.
4. Training aids (projector connected to PC, white board, flip chart, etc.) Optional, but helpful for larger groups
5. Tech support for hardware and software issues (from both IDSH and training facility IT staff)
6. System requirements needed to access and run I-NEDSS (refer to TECHNICAL NOTES section of this document on page 6)

Space will be limited, and it is possible we will have two people per computer for hands-on training activities.

To confirm for a class, LHDs will need to send the following information for each participant:
• Names of the participants attending training
• Title or job responsibility
• Contact Phone Number
• Contact Email

Training will be given in contiguous districts, so if your LHD cannot participate in training inside of your district, you will have opportunities to participate in training in neighboring districts. The I-NEDSS Training Team will work to include your LHD wherever you choose to do training.

Training agenda will be provided electronically one week prior to the actual training session.

You may sign up for training sessions now. Email I-NEDSS@isdh.in.gov with the required information above.

The I-NEDSS Project Team will send out continued reminders prior to training in your district. These reminders will be communicated via the same general communications vehicles identified on page 2 of this document.

SUPPORT PLAN

I-NEDSS Project Team includes 1st and 2nd line support.

Helpdesk support is available Monday through Friday 8am – 4pm EST.

Contact I-NEDSS@isdh.in.gov to report any problems/feedback you wish to give. You may also utilize the SUPPORT tab feature of I-NEDSS from directly inside the application.

Please include the following information in your email:
- Name
- I-NEDSS User Name
- Location / County
- Phone Number
- Email Address
- Description of Problem
- Identification Number for the ELR, CDR, or Case Investigation

I-NEDSS Project Team will catalog the issue and assign it for appropriate resolution, and will return a response to you. If additional information is required, our support team will follow-up with a phone call.

Beginning in March, the I-NEDSS Project Team will be expanding our helpdesk communication routes to include a telephone number staffed during the normal helpdesk support hours.   This number will be published to the I-NEDSS user community and will be an additional method for receiving feedback and communication from the I-NEDSS users.

Additional forms of self-support are available including the following:
- I-NEDSS Frequently Asked Question (FAQ) sheet
- I-NEDSS online training manual (pdf version)
- I-NEDSS online Infection Control Practitioner (ICP) web-training
- I-NEDSS online in-application help text

The I-NEDSS Project Team will continue to make enhancements to the application during 2009. Application Enhancements will be based on feedback received via the helpdesk, as well as on information received during our collaborations with external improvement organizations such as the Marion County Health Department "Common Ground Project" (sponsored by the Robert-Wood Johnson Foundation) or through our collaborative efforts with The Association of Infection Control Practitioners (APIC), Indiana Chapter.

TECHNICAL NOTES

I-NEDSS Minimum Technical Requirements	Not Supported by I-NEDSS
Web-based browser capabilities: ▪ Internet Explorer v6.0 and above ▪ Pop-ups must be enabled ▪ Java Scripting is required	▪ Netscape ▪ Firefox ▪ Mozilla
Internet connections ▪ Home PC - DSL or Broadband / Cable Modems ▪ Office PC – T1 Networking ▪ Air Card	▪ Dial-up modems
Hardware ▪ Windows based desktop ▪ Windows based laptop ▪ Windows based notebook ▪ Microsoft XP or Vista Operating Systems ▪ Screen Resolution – 1024 x 768 or above	▪ Macintosh desktop/laptop/notebook ▪ Palm, Blackberry or PDA-type devices ▪ Screen Resolution - 800 x 600 or below
Software ▪ Adobe Reader v7.0 or above ▪ Flash Player v9 or above	

USER ROLES

Organization Type	Role	Purpose
ISDH	Admin	
ISDH	User	Subject Matter Expert – Epi Resource Center
ISDH	Field Epidemiologist	Field Epidemiologist ▪ Epi Resource Center ▪ Case Investigator
ISDH	Data Entry	
LHD	Admin	
LHD	User	Case Investigator
Lab	Admin	
Lab	User	Entry of Electronic Lab Reporting (ELR)
Hospital	Admin	
Hospital	User	Entry of Electronic Lab Reporting (ELR)
Hospital	User	Entry of Communicable Disease Reporting (CDR)
Practitioner	Admin	
Practitioner	User	Entry of Communicable Disease Reporting (CDR)

APPENDIX A – What is I-NEDSS?

The Indiana National Electronic Disease Surveillance System (I-NEDSS) is a Web-based application that promotes the collection, integration, and sharing of data at federal, state, and local levels.

The purpose of I-NEDSS is to automate the current process for reportable diseases, as defined by Indiana Administrative Code 410 (http://www.in.gov/legislative/iac/T04100/A00010.PDF).

The system will include electronic lab reports (ELRs), communicable disease reports (CDR), and case investigations.   Eventually, I-NEDSS will replace the paper-based reporting system currently in use.

Benefits of I-NEDSS include:
1. **increased speed**
2. **increased accuracy**
3. **increased accountability**
4. **increased security**
5. **increased situational awareness for state and local investigators**

The process starts with a patient and an observation. Observations are confirmed/ or suspected accounts of disease based on either a lab report or a Communicable Disease Report (CDR) from a lab, hospital, or practitioner.

For a lab report, the moment the sample is released and identified as positive; it is routed to the ISDH Epi Resource Center (ERC) for review by the Disease Subject Matter Epidemiologist (DSME). The DSME reviews the lab and forwards it onto the appropriate local health department (LHD) electronically if a case investigation should be conducted. The whole process is designed to happen in a matter of minutes.

For a CDR, the process is much more straightforward. Once a CDR is submitted by a hospital or healthcare provider it is sent directly to the local health department with a notification forwarded to ISDH. The information is transmitted in real-time.

The investigation is the jurisdiction of the LHD where the patient resides. I-NEDSS is built to follow these rules, but it is also built with a degree of flexibility.

For instance, a LHD may review the observations and/or begin a Case Investigation and then decide that they do not have jurisdiction. Jurisdiction may be transferred with recommendation of the LHD investigator and the approval of the DSME. The process is all conducted electronically in a secure environment.

I-NEDSS also does not require an observation before the LHD begins a Case Investigation. Case Investigations can be initiated by the LHD based on phone calls, email requests, or other means.   I-NEDSS will allow for an investigation to be executed directly by the LHD in these situations.

Investigations that are started by the LHD are also noted by the DSME at ERC, as well as by the ERC Field Epis. In this manner, an ISDH epi is made aware of the investigation based on disease and also based on geographic area (district). This allows Public Health improved surveillance capabilities when it comes to tracking and responding to possible disease outbreaks within the State of Indiana.

When investigations are completed, the results are submitted by the LHD to ISDH. The approval process includes a review by the DSME. Once completed, case information is stored and reported to various entities, including the local health departments and the Center for Disease Control (CDC).

Through partnerships with the Regenstrief Institute, the Mayo Clinic, and the Indiana State Public Health Lab, ELRs are continually monitored for data-quality and improvement. Through compliance with HIPPA and PHIN (Public Health Information Network), data gathered in I-NEDSS is kept secure with access granted only to those with proper jurisdiction to conduct an investigation.

Through a partnership with the CDC, ISDH, Indiana hospitals, practitioners, reference labs, all 94 Local Health Departments in the State of Indiana and the utilization of I-NEDSS for electronic disease reporting; Public Health capabilities for reporting and assessment of diseases and potential outbreaks can be greatly improved to provide security for the citizenship which we serve.

APPENDIX B – I-NEDSS v3.4.2 Features Listing

ELECTRONIC LAB REPORTS (ELRs)
- Regenstrief Institute Communicable Disease Processing Feed v1.0
  - INPC Participating Hospitals
  - MACL (Mid-America Clinical Labs)
  - LabCorp
  - Quest Laboratories (Central Indiana Region)
- Mayo Clinic
- Indiana State Public Health Lab
- ARUP
- Quest Laboratories – Chantilly, VA

ISDH Subject Matter Epi (SME)
- Assign Function to send ELRs on to LHD
- Exception Processing for ELRs not requiring investigation
- Case Investigation Notifications
- Case Investigation Review Process
- Archived data from 2005-2008
- Access to the ISDH Chronic Hep B/C databases
- I-MAIL, Secure email within I-NEDSS
- Base capability for generating analysis and historical reporting

LHD Processing Capabilities
- ELR notification and processing
- CDR notification, entry and processing
- Case Investigation (CI) entry and processing
  - Demographics
  - Epidemiological
  - Clinical
  - Risk Factor
  - Contact Worksheet
  - Investigator Comments
- Reassignment of all observations
- Dismissal of all observations
- Case Investigation Review Process
- Electronic Case Submission to ISDH
- Archived data from 2000-2008
- Access to the ISDH Chronic Hep B/C databases
- I-MAIL, Secure email within I-NEDSS

ISDH Field Epidemiologist
- Oversight and Support of LHD Case Investigation Process
- Primary Case Investigation Processing for Vaccine Preventable Diseases (VPD)
- I-MAIL, Secure email within I-NEDSS

Hospital
- I-NEDSS Electronic Lab Report (ELR) Entry Screen
- I-NEDSS Communicable Disease Report (CDR) Entry Screen
- Submission Reporting Capabilities
- I-MAIL, Secure email within I-NEDSS

Lab
- I-NEDSS Electronic Lab Report (ELR) Entry Screen
- Submission Reporting Capabilities